

L 62103-65

ACCESSION NR: AP5015669

magnetic field, the authors consider data supplied from artificial satellites and space probes. They first consider measurements on the stationary geomagnetic field, determined within the field and at the boundary of the field. The boundary data and space data come from measurements made with the several space probes, particularly the Pioneer and Explorer probes. The next consideration involves streams of charged particles as they move into and through this field. Thirdly, the authors examine the time variation of the field and the closely related variation in intensity of corpuscular streams. In investigating the interaction between charged particles and the geomagnetic field, consideration is given to the total effect on the magnetic field of moving nonreacting particles within and at the boundary of the geomagnetic field, the effect associated with the collective action of external streams of rarefied magnetized plasma on the magnetic field, and the connection between processes outside and inside the field when charged particles break through. Orig. art. has: 10 figures, 2 tables, and 7 formulas.

ASSOCIATION: none

SUBMITTED: 18Feb65

ENCL: 00

SUB CODE: ES, AA

NO REF SOV: 012

OTHER: 032

Card 2/2 *llv*

L 10590-66 FSS-2/EWT(1)/FS(v)-3/FCC/EWA(d) TT/GW
ACC NR: AP6000304 SOURCE CODE: UR/0293/65/003/006/0854/0876

AUTHORS: Pletnev, V. D.; Skuridin, G. A.; Chesalin, L. S.

ORG: none

TITLE: The dynamics of the geomagnetic trap. 2

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 6, 1965, 854-876

TOPIC TAGS: geomagnetic field, geomagnetism, magnetic field, magnetic field plasma effect, solar magnetic field

ABSTRACT: Various hypotheses on the boundary forms of the magnetosphere¹² are studied, as a continuation of the authors' previous work (Kosmicheskiye issledovaniya, 3, No. 3, 408, 1965). A useful mathematical relationship is the condition of magnetostatic equilibrium obtained from the equation of plasma motion in a magnetic field

$$\rho \frac{dv}{dt} = - \text{grad } p + [j, H],$$

where ρ is the mass density of the plasma, v is the velocity of the particle stream, p is pressure, H is the magnetic field potential, and j is the stream density. Under certain assumptions ($dv/dt = 0$), it can be shown that the limit of the magnetosphere corresponds to the condition

$$p = \frac{H^2}{8\pi}.$$

Card 1/2

UDC: 550.385.41 (047)

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ACC NR: AP6000304

2

The authors divide the existing approaches to the problem into three basic categories. Authors of the first group reviewed do not consider the magnetization of interplanetary plasma flowing around the magnetosphere of the earth. A second group considered a magnetohydrodynamic shock wave flowing around the earth's atmosphere. The third approach is that of combining the study of the solar magnetic field and the structure of the geomagnetic field in the boundary region. The first two approaches are reviewed with development of principal working equations and sketches of the magnetosphere limits. A detailed discussion is given on the computation of neutral points and on the topic of solar stream penetration of the magnetosphere. Several plots of the magnetic field in relation to neutral points and with respect to various sections (e.g., meridional) of the earth are shown. Additional discussion of the structure of the earth's magnetic tail is given along with sketches of the shape of the tail in two planes. A total of 57 different technical works are mentioned in the review, and use is made of data collected in the OGO, IMP, Explorer, and Electron satellite series. Orig. art. has: 18 figures and 35 equations. 12 12

SUB CODE: 08/ SUBM DATE: 18Aug65/ ORIG REF: 006/ OTH REF: 051

Card 2/2

L 03837-67 ENT(1) SCTB DD/GD

ACC NR: ATG036683

SOURCE CODE: UR/0000/66/000/000/0384/0385

AUTHOR: Chesalin, L. S.; Dmitriyev, N. Ye.; Gorbov, F. D.; Novikov, M. A.;
Ushakov, V. I. 3.2

ORG: none

TITLE: A device for studying interdependent group activity (two to eight operators)
[Paper presented at the Conference on Problems of Space Medicine held in Moscow
from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy
kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii,
Moscow, 1966, 384-385

TOPIC TAGS: group dynamics, cosmonaut training, cosmonaut selection, space
psychology

ABSTRACT: In 1963, two of the authors described a device which could be used to
evaluate the behavior of a group of three men during interdependent
activity. It was shown that the device could reflect the activity of the
group with great accuracy and that evaluation results agreed with some
sociological tests despite its simplicity of design. Consequently, a device
which could evaluate the interdependent activity of a group of eight men

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L 08837-67

ACC NR: AT6036683

was constructed. It consists of eight small, identical panels each consisting of a dial and potentiometer. The experimenter is provided with a large panel consisting of 8 dials which act as doubles of the individual ones. In addition, he has a device indicating the sum of the deviations of all the dials from zero. There are switches permitting exchange between all potentiometers and dials on a second section of the panel.

After standardizing an exchange coefficient, the experimenter feeds current to the subjects' dials. They in turn attempt to reset the dial on zero according to instruction. Each subject sees only his own dial which he himself can only manipulate. When interexchange coefficients are not equal to zero, the problem has an interdependent nature in that all remaining dials move, besides that of the individual subject; each individual dial reflects the disposition of all the potentiometers. This set-up is portable, fitting into two carrying cases and is powered by 4 batteries (40 mamp).

From preliminary experiments it was found that a number of basic situations common to a three-man group are not encountered in the larger, eight man group. The presence of a leader, or group of leaders is perhaps necessary. The device can be used to execute commands, break a group down into separate subgroups, and for a number of other experi-

Card 2/3

L 08637-67

ACC NR: AT0036683

ments. It seemed desirable to construct special biorecording systems, which could be used in concert with this set-up.

Finally, a reference formula determining the dial reading on the i panel α_i ($i = 1, 2, \dots, v$) is given:

$$L_i = \sum_{k=1}^n a_{ik} x_k$$

Here, x_k is the deviation from zero of the potentiometer on the k panel and a_{ik} is the coefficient of the influence of the k potentiometer on the dial. The sum of indicator readings are:

$$\alpha_c = \sum_{i=1}^v \delta_i / \alpha_i$$

Here δ_i equals zero or one and indicates the position of the additional switch on the panel, which permits the exclusion of some of the dials from the total. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 05 / SUBM DATE: 00May66

Card 3/3

CHESALIN, V.H. , PETROVA, M.S., SHVEBELBIT, K. G., SYTEN, V. P. and BALAKLEYTS, I. I.

"New methods of preparing alpha, beta, and gamma sources," a paper submitted at the International Conference on Radioisotopes in Scientific Research, Paris, 9-20 Sep 57.

CAESALINA, E. N.

USSR.

The stability of thiamine bromide. V. M. Ioshkova, V. V. Zvarykina, and B. N. Chzaiina. *Trudy Vsesoyuz. Nauch.-Issledovatel. Vsesoyuz. V. 4, 20-26 (1953).*—Regardless of the degree of purity, cryst. thiamine bromide does not contain more than 0.2% ash and remains stable in the dark for 6 months at 0-27° and 37-100% humidity. In ampuls in soln. of 20-50 mg./ml. it is well preserved for 6 months. Storing of higher concns. is not recommended. Usual methods of sterilization do not affect it adversely. Storing in the dark is recommended. B. S. Leyna.

CHESALINA, E. N.,

U.S.S.R.

Vitamin values of U.S.S.R. food articles. V. M. Ioskova, L. N. Kravchina, T. P. Ivanova, and E. N. Chesalina. *Trudy Vsesoyuz. Nauch.-Issledovatel. Vitamin. Inst.* 4:170-80(1953).—A survey of the vitamins B₁, B₂, PP, ascorbic acid, and carotene of food products most commonly used in daily diets in the U.S.S.R. B. S. Levine. /

CHESALINA, E. N.

USSR

Chemical analysis of vitamin B₁ in industry. V. M. Piskova, V. V. Zvorykina, and E. N. Chesalina. *Trudy Vsesoyuz. Nauch.-Issledovatel. Vitamin. Inst.* 6, 238-9 (1958). B. S. Levine

CHESALOV, A., zasluzhennyy deyatel' nauki i tekhniki RSFSR, doktor tekhn.nauk,
prof.

The Main Designer. Av.i kosm. 46 no.9:72-76 S '63. (MIRA 16:10)

L 27229-65 ENT(m)/EPA(w)-2/EWA(m)-2 Feb-10/Pt-10 IJP(c)

ACCESSION NR: AP5002141

S/0120/64/000/006/0030/0032

AUTHOR: Antonov, A. V.; Blokhov, M. V.; Venikov, N. I.; Kalinin, S. P.;
Kurashov, A. A.; Perov, P. Ye.; Chesalov, A. A.

TITLE: Reducing the repetition frequency of ion clusters in the IAE cyclotron

SOURCE: Priory i tekhnika eksperimenta, no. 6, 1964, 30-32

TOPIC TAGS: cyclotron, IAE cyclotron

ABSTRACT: A system intended for a fourfold reduction of the repetition frequency of ion clusters on the cyclotron target is described. The ions are deflected in the vertical plane by a h-f sinusoidal voltage applied to a special deflecting system placed in the ion duct; admitting the required clusters to the target takes place at zero-voltage moments. Formulas for designing the deflecting-electrode shape and calculating the deflecting voltage are supplied. A block diagram of the electronic system is explained. The system can be tuned within 1.15-1.75 Mc.

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L 27229-65

10

ACCESSION NR: AP5002141

"The authors wish to thank N. N. Khaldin, V. I. Lamunin, and P. I. Vasil'yev for designing the system; Yu. V. Korshunov for calculating the tuned circuit of the deflecting system; R. A. Ariskina, B. I. Khoroshavin, and Ye. I. Rybakov for their help in the preparation of experiments; and A. A. Ogloblin and V. M. Pankratov for their constant interest in the project." Orig. art. has: 1 figure and 8 formulas.

ASSOCIATION: Institut atomnoy energii (Institute of Atomic Energy)

SUBMITTED: 19Nov63

ENCL: 00

SUB CODE: NP

NO-REF SOV: 002

OTHER: 000

Card 2/2

CHESALOV, A.V., IU. A POBEDONOSTSEV, and V.S. VEDROV.

Materialy po aerodinamicheskomu raschetu samoletov. Sbornik statei. Pod red. V.L. Aleksandrova. Moskva, 1929. 191 p., illus., tables, diagrs. (TSAGI. Trudy, no. 42)

Summary in English.

Title tr.: Materials of aerodynamic aircraft design.

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

Q127. R9A59

CHESALOV, A. V.

Ispytaniia opytnykh samoletov. (Kratkoe rukovodstvo dlia letnykh stantsii zavodov aviapromyshlennosti). Moskva, 1938. 115 p., diagrs. (TSAGI. Trudy, no. 358)

Bibliography: p. 115.

Title tr.: Testing of experimental aircraft. (Brief instructions for flight stations in aircraft factories).

QA911.M65 no. 358

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

Chesalov N.V.
GORSKII, V. P., and A. V. CHESALOV.

Issledovanie neupravliaemogo razvorota samoleta TSAGI-6 pri razbege.
(Tekhnika vozdushnogo flota, 1938, v. 12, no. 3, p. 7-23, diagrs.)

Title tr.: Investigation of uncontrolled swerve (ground looping) at take
off in a CAHI-6 aircraft.

TL50h.T4 1938

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

CHESALOV, A. V.

Opyt bor'by s vibratsiyami na samoletakh. Moskva, 1940. 44 p., illus.
(TSAGI. Trudy, no. 494)

Title tr.: Experiments on prevention of airplane vibrations.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955

CHESALOV, B.

Thrifty consumption of every kilowatt. MTO 2 no.1:28
Ja '60. (MIRA 13:5)

1. Starshiy Inspektor ~~elektroinspekt~~si trenat "Moselektrotrans"
Upravleniya passazhirenskogo transporta Mosgorispolkoma.
(Moscow--Street railroads)
(Moscow--Trolley buses)

CHESALOV, B.

Freight and wires. Za bezop.dvizh. 5 no.10:10 0 '62. (MIRA 15:12)
(Traffic safety)

CHESALOV, B. A.

SOKOLOV, V.D.; CHESALOV, B.A.

Experience of innovators of the streetcar and trolley bus overhead
conductor maintenance service. Gor.khoz.Mosk. 28 no.3:29-32 Mr '54.
(MLRA 7:6)

(Electric railroads--Wires and wiring) (Trolley buses)

CHESAIČVA V. S.

USSR/ Chemistry - Catalysis

Dec 50

"Effect of Thermal Processing on the Catalytic Activity of Silica Gel," V. A. Dzis'ko, A. A. Vishnevskaya, V. S. Chesalova, Physicochem. Inst imeni L. Ya. Karpov, Lab of Tech Catalysis, Moscow

"Zhur Fiz Khim" Vol XXIV, No 12, pp 1416-1419

Calcined 2 glassy forms of silica gel of uniform porosity and 1 chalky form with nonuniform porosity at temperatures up to 1000° C. Structural water decreased with temperature. Degree of covering of surface by hydroxyl groups was independent of temperature. Catalytic activity in vapor-phase hydrolysis of chlorobenzene decreased rapidly for glassy forms, more slowly for chalky form, latter retaining sufficient activity up to 1,000°. Specific catalytic activity was independent of temperature for glassy forms, increased slightly with temperature for chalky form.

PA 170T16

PA 170T16

Chesalova, V. S.

Specific Catalytic Activity of Metallic Platinum. V. S. Chesalova and G. K. Borekov (Doklady Akad. Nauk S.S.S.R., 1952, 85, (2), 377-379).—[In Russian]. Six catalysts of widely different sp. surface area were examined: platinized silica gel (0.2 and 0.5 wt.-% Pt; 30 and 73 m.²/g. Pt, resp.); spongy Pt made by sintering Pt black (0.17 m.²/g.); Pt wire, 0.2 mm. in dia (9.3 × 10⁻⁴ m.²/g.); gauze made from wire 0.09 mm. in dia (20.7 × 10⁻⁴ m.²/g.); and foil 0.2 mm. thick (4.7 × 10⁻⁴ m.²/g.). To compare their activity they were used to catalyze the oxidation of SO₂; the activity/unit surface area was found to be almost the same for each material, except in the case of the foil, which had a somewhat greater activity than the others (possibly caused by differences in chem. compn.). Hence the catalytic activity of Pt is largely independent of the method of preparing the catalyst, the use of a carrier, mech. working, heat-treatment, and grain-size, but is principally determined by the surface area.

G. V. K. T.

①

CHESALOVA, V. S.

Dissertation: "Specific Catalytic Activity of Platinum." Cand Chem Sci, Sci Res
Physicochemical Inst imeni L. Ya. Karpov, Moscow 1953.

W-30928

SO: Referativnyi Zhurnal, No. 5, Dec 1953, Moscow, AN USSR (~~W-30928~~)

CHESALOVA, V.S.

Using isotopes in catalysis. Khim. prom. no.3:185-186 Ap-May
'56. (MLRA 9.10)

(Radio isotopes) (Catalysis)

CHESALOVA, V.S.

Meeting on the use of isotopes in catalysis. Zhur.fiz.khim. 30
no.9:2129 2132 D 1956. (MIRA 9:12)
(Isotopes--Congresses) (Catalysis--Congresses)

Chesapeake, V.S.

S/064/60/000/006/005/011
B020/B054

AUTHORS: Boreskov, G. K. and Chesalova, V. S.

TITLE: Production of Industrial Catalysts 7

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 6, pp. 38-44

TEXT: Catalysts which were initially prepared under laboratory conditions with primitive equipment in small workshops are now produced on a large industrial scale. The essential factor is the quality of the catalyst, the consumption of material being of no, or only inferior, importance. This factor primarily depends on the chemical composition of the catalyst. Fig. 1 shows the use of the individual elements of the periodic system as catalysts in the industry, all natural elements being used except for the rare gases. The "blank spots" in the table are mainly due to an insufficient investigation of the respective elements as catalysts; rhenium has recently gained importance as a catalyst. In the industrial practice, complicated mixtures are mostly used, the strict observance of the formulas being of great importance in many cases. As an example, Fig. 2 shows the change in catalytic activity of aluminum oxide on introduction of NaOH. ✓

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Production of Industrial Catalysts

S/064/60/000/006/005/011
B020/B054

Fig. 3 gives data on the catalytic activity of Si-Zr catalysts of the same gross composition, one of them being a mechanical mixture, the other a chemical compound. The catalytic activity depends, however, also on the extent of the inner surface. Fig. 4 schematically shows the optimum porosity of catalysts for various reactions; it is stated that the properties of the catalyst can be altered by a change in the porous structure at constant specific activity only. Fig. 5 shows the dependence of the pore volume of active aluminum oxide on the pH of the solution during the precipitation of aluminum hydroxide, and on the amount of nitric acid added during the peptization. Table 2 gives the characteristics of typical carrier materials for catalysts. Fig. 6 shows a cross section of granules of a palladium catalyst, Fig. 7 the granules of porous corundum in the form of microspheres (Laboratoriya tekhnicheskogo kataliza (Laboratory of Technical Catalysis) of the Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute imeni L. Ya. Karpov)), Fig. 8 the variation of the required catalyst amount and of the hydraulic drag of the catalyst layer with increasing dimensions of the catalyst granules of unchanged form, and Fig. 9 some special forms of catalysts and carriers used to form a uniform catalyst layer.

Card 2/3

Production of Industrial Catalysts

S/064/60/000/006/005/011
B020/B054

I. Ye. Neymark (Ref. 5) is mentioned. There are 9 figures, 2 tables, and 9 references: 6 Soviet, 2 US, and 1 British.

✓

Card 3/3

BORESKOV, G. K.; ~~CHESALOVA, V. S.~~ [Chesalova, V. S.]

Manufacture of industrial catalysts. Analele chimie 16 no.3:108-120
Jl-S '61.

(Chemical industries) (Catalysts)

CHESALOVA, V.S.

Conference on the selection and production of catalysts for
industrial processes. Kinki kat. 4 no.2:326-328 Mr-Apr '63.
(MIRA 16:5)

(Catalysts—Congresses)

CHESCA, Gh., ing.

Method of conjugate points in the case of variable rates
of speed. Petrol si gaze 14 no.10s476-480 0'63.

CHESCA, L.

Determination of mechanical characteristics of rocks by
boring. p. 401. Vol. 6, no. 9. Sept. 1955. PETROL SI GAZE Bucuresti.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2. Feb. 1956.

CHESHANKOV, B.I.

The minimum weight shafts at the given critical revolutions.
Godishnik mash elekt 10 no.1:105-114 '51 (publ. '62).

KONSTANTINOV, M. S.; CHESHANKOV, B. I.

Kinematic invariants for the analysis of accelerations in
plane mechanisms. Godishnik mash elekt 12 no. 1:89-100 '62.
[publ. '63].

CHESHANKOV, B.I.

The Zhukovskiy rotations in the plane-parallel motion of a solid.
Godishnik mash elekt 10 no.1:115-118 '61 (publ. '62).

TOPENCHAROV, V.; CHESHANKOV, B.

On the kinematics of multi-dimensional Euclidean spaces. Doklady
BAN 16 no.6:573-576 '63.

1. Submitted by Corresponding Member B.Petkanchin.

NEDIALKOV, I.P.; PISAREV, A.M.; CHESHANKOV, B.I.

Differential equations determining the form of a shaft with minimum weight in some given critical revolutions. Godishnik mash elekt 9:57-60 '61. [publ. '62]

1. Predstavlena ot dots. Iv. Kis'ov, rukovoditel na kat. "Tekhnicheska mekhanika".

CHESHANKOV, Khr.

Surgery of female genital tumors which appear to be inoperable during clinical examination. Nauch.tr.ISUL, Sofia 2 no.3:177-186 1953.

1.Klinika po akusherstva i ginekologiya. Direktor: dots. N.Nikolov.
(GENITALIA, FEMALE, neoplasms,
surg., of inoperable tumors)

CHESHANKOV, Khr.

Original in Bulgarian, Sofia, 1956.

Vaginal cytodiagnosis in every-day practice. Khirurgia, Sofia
9 no.5:415-422 1956.

1. Inst. za psotsializatsiia i usuvurshenstvuvane na lekarite--
Sofia. Katedra po akusherstvo i ginekologia zav. katedrata:
doks. N. Nikolov.

(VAGINAL SMEARS,
(Bul))

CHESHANKOV, Khr.

BULGARIA

[Academic Degrees]

[Affiliation] Second city lying-in hospital--Sofia (II Gradski
rodilen dom); Chief Physician Iv. DOGANOV

[Source] Sofia, Akusherstvo i Ginekologiya, No 3, 1962, pp 60-62

[Data] "A Case of Meigs Syndrome. Interpretation of the Syndrome."

CHESHANKOV, Khr.

Meig's syndrome. Case report and discussion. Suvr. med. 13
no.3:60-62 '62.

(OVARIAN NEOPLASMS) (HYDROTHORAX)
(ASCITES)

CHESHANKOV, Khr.

Apropos of the Allen and Masters syndrome. Akush. ginek. (Sofia):
4 no.4:240-243 '65.

1. II gradski rodilen dom, Sofia (gl. lekar: dr. Iv. Bogdanov).

CHESHANKOV, L.

TECHNOLOGY

Periodicals: MINNO DELO. Vol 13, No. 5 Sept./Oct. 1958.

CHESHANKOV, L. Photographing the spaces of removed coal in the V. Kolarov
Mines of the State Mine Enterprises. p. 47.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 4, April 1959,
Unclass.

CHESHANKOV, L., inzh.

Underground mining, and requirements of mine surveying instruments.
Tekh delo 467:2 9 Mr '63.

Quantitative determination of sodium azide

K. S. Chestakov, *ANAL. CHEM.*, 1954, 26, 1000

ANAL. CHEM., 1954, 26, 1000

1954. The procedure is similar to that of Chestakov and Dandur (1954, 44, 1000).

precipitant used is $\text{K}_2\text{S}_2\text{O}_8$.

and use a reagent of high purity.

The K₂S₂O₈ reagent is prepared by heating

30% alk. solution of potassium persulfate to

approx. 0.3 g. KOH/l. and 31.2% H₂O₂/l.

metals and Mg are best removed with a solution of

72.5% Na_2CO_3 in 50% H_2SO_4 .

2% alk. solution of hydroxylamine.

The average error in determination is 0.5%.

CHESHENKO, A.

"Staff" of 150 enthusiasts. Voen. znan. 39 no.6:30 Je '63.
(MIRA 16:8)

1. Predsedatel' soveta samodeyatel'nogo kluba podvodnogo sporta,
Sochi.

(Sochi--Diving, Submarine)

CHESHKOV, Aleksandr Fedorovich, kand. ekonom. nauk, starshiy nauchnyy
sotr.; FREYDMAN, S.M., red.; TRUKHINA, O.N., tekhn. red.

[Integrated mechanized brigades and teams] Kompleksnye me-
khanizirovannye brigady i zven'ia. Moskva, Izd-vo sel'khoz.
lit-ry, zhurnalov i plakatov, 1961. 133 p. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki
sel'skogo khozyaystva (for Cheshkov).
(Farm management)

U S S R .

553: Determination of sodium in antimonate.
K. S. Cheshev, *Anal. Chem. USSR* 1954, 9
~~Abstracted from~~
method for determining Na as antimonate in the
presence of large amounts of K is proposed.
With K to Na ratios up to 100 the Na from a 24
to 25 per cent ethanol solution is satisfactory. With
K to Na ratios > 100 the ethanol concn should be
30 per cent. But with higher ratios excess of K is
separated as KCl with ethanol. (U. S. SOURCE)

CHESHEV, K. S.

USSR/Chemistry - Quantitative analysis

Card 1/1 : Pub. 145 - 11/14

Authors : Cheshev, K. S.

Title : Quantitative determination of sodium in form of antimonate

Periodical : Zhur. anal. khim. 9/4, 239-244, Jul-Aug 1954

Abstract : A micro-method for the determination of Na in the form of antimonate in natural objects (e.g. plants), in the presence of large K quantities, was developed. The average arithmetic error in determining 0.2 - 3 mg of Na \sim \pm 3%. The use of ammonium, ammonium carbonate, o-hydroxyquinoline and ethyl alcohol mixtures, for the separation of admixtures contained in Na and K salts, offers the possibility of determining Na not only in plants but also in other natural objects. Four references: 2-USSR; 1-German and 1-USA (1924-1949). Tables.

Institution : The Kirghiz Scientific Research Institute of Animal Husbandry, Frunze

Submitted : April 30, 1953

CHESNEV, K. S.

USSR

Determination of sodium as antimonate
J. Anal. Chem. U.S.S.R. 9, 205-7, 1954 (English translation)
(ton).—See C.A. 48, 13530f.

CHESHEV, K.S.
ZAKHAR'YEV, N.I.; OBUKHOVA, Z.D.; CHESHEV, K.S.; YAKUSHENKO, Ye.S.

Composition and food value of grasses in main types of mountain
pastures and hay of sown hayfields of Susanyr. Izv. AN Kir. SSR
no.3:43-101 '56. (MLRA 10:4)
(Susanyr--Feeding and feeding stuffs)

CHESHEV, Leonid Semenovich; PROTOPOPOV, G.F., otv. red.

[Growth of Shrenk spruce stands] Khod rosta nasazhdenii
eli Shrenka. Frunze, Izd-vo AN Kirg.SSR, 1963. 36 p.
(MIRA 17:5)

CHESHEV, P. I.

"Soldering Metal with Ceramic," Stek. i ker., 9, No. 7, 1952

CHESHEV, P.I.

Inert-gas-shielded arc welding of aluminum. TSvet.net.26 no.4:77-79
J1-Ag '53. (MIRA 10:10)

(Aluminum--Welding)

CHASHEV, P.I., inch.

High density of current used for welding. Energothoz. za rub. no.1:
51-52 Ja-F '57. (MIRA 12:11)
(Electric welding)

Cheshev, P.I.

135-6-13/13

SUBJECT: USSR/Welding.

AUTHOR: Cheshev, P.I., Engineer.

TITLE: Welding of Large Structures Abroad (Svarka krupnogabaritnykh izdeliy za rubezhom).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, #6, pp 29-31 (USSR)

ABSTRACT: The article represents a brief review of information contained in foreign periodicals of 1955 and the first half of 1956. Welded turbines, electric generators, boiler drums, pressure vessels, presses, were mentioned as items of particular interest alongside with the technology of their production and some features of production equipment used.

The article contains 3 photographs. There are 7 bibliographic references (all of which are in English).

ASSOCIATION: "TsNIITMASH"

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 1/1

CHESHEV P. I.

SOV-135-58-9-9/20

AUTHORS: Gel'man, A.S., Doctor of Technical Sciences, Professor, Mel'-bard, S.N., Engineer, Sinadskiy, S.Ye., Candidate of Technical Sciences, and Cheshev, P.I., Engineer

TITLE: Electric Slag Welding of Hydro-Turbine Shafts (Elektroshlakovaya svarka vala gidroturbiny so svarnoy obechaykoy)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 9, pp 26-32 (USSR)

ABSTRACT: Information is presented on experimental work conducted by I.R. Kryamin, at the TsNIITMASH, together with LMZ, NKMZ, KhTGZ, ~~NKMZ~~ and the Izhorskiy Plant on the development of materials and technology for the production of welded shafts of powerful hydro-turbines with the use of the electric-slag welding process. In this connection, weldability of "20GSL" and "20GS" steel was investigated, welding technology was developed, and tests were carried out on turbine shafts for the Stalingrad GES. The following personalities participated in the work: Candidate of Technical Sciences I.L. Brinberg, and Engineers A.I. Rymkevich, A.D. Kuznetsova-Sadovnikova, N.I. Malyavkina. From LMZ: Engineers V.I. Faust, V.D. Averin, Z.M. Gamze, G.A. Branovskiy, G.I. Mart'yanov, R.K. Fasulati and the welding operators V.A. Petrov, M.I.

Card 1/2

Electric Slag Welding of Hydro-Turbine Shafts

SOV-135-58-9-9/20

Gorbachev, M.A. Grinovskiy. Technical economical analyses were carried out by Engineer S.P. Golosovskiy (TsNIITMASH). It was proved that "20GSL" and forged "20GS" steel can be successfully welded by the electric-slag method if the steel had been properly cast. Information includes detailed recommendations including technology and materials. There are 7 tables, 4 graphs, 3 diagrams, 4 photos and 5 Soviet references.

ASSOCIATION: TsNIITMASH

1. Turbines 2. Shafts--Welding 3. Arc welding--Applications

Card 2/2

L 37005-66 EWT(m)/T/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(s) JD/HM
ACC NR: AP6020381 SOURCE CODE: UR/0114/66/000/006/0032/0035

AUTHOR: Timofeyev, M. M. (Candidate of technical sciences);
Cheshev, P. I. (Engineer)

75
70
B

ORG: none

TITLE: Selection of austenitic steel for power-plant welded structures

SOURCE: Energomashinostroyeniye, no. 6, 1966, 32-35

TOPIC TAGS: pipe, austenitic steel, heat resistant steel, seam welding, metal joining, weld evaluation, steam power plant, mechanical fatigue, rupture strength, tensile stress, elongation, impact stress, yield stress /
Kh16N9M2 austenitic steel

ABSTRACT: An austenitic stainless heat-resistant Kh16N9M2 steel (TU 747-62) for welded power-plant steam pipelines and equipment operating at superhigh steam pressures in the 580—650C temperature range has been developed. Cast Kh16N9M2 steel contains 2—4% ferrite to prevent hot cracks in the heat-affected zone during welding and to ensure stable mechanical properties in welded joints. In tests at room temperature, Kh16N9M2 had a yield strength of 28-34 kg/mm², a

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UDC: 669.15:621.791.05

L 37003-66

ACC NR: AP6020381

5

tensile strength of 55-60 kg/mm², an elongation of 55-75%, a reduction of area 55-70%, and an impact toughness of 25-35 kgm/cm². The corresponding figures at 650C were 12-14 kg/mm², 32-35 kg/mm², 35 to 38%, 62-64% and 25-35 kgm/cm², respectively. Prolonged aging does not cause steel embrittlement. For example, the mechanical properties of steel aged at 650C for 8000 hr were room-temperature yield strength 28.2 kg/mm², tensile strength 63.4-65.5 kg/mm², elongation 65.9-66.7%, reduction of area 73.3%, and impact toughness 21.0 kgm/cm². The corresponding figures at 630C were: 14 kg/mm², 34.6-35.8 kg/mm², 33.7 to 36%, 66% and 29.2-33 kgm/cm², respectively. In stress-rupture tests at 650C for 100,000 hr, Kh16N9M2 steel had a rupture strength of 8-10 kg/mm² and a creep rate of 1% in 10⁵ hr under a 5.5-6.0 kg/mm² stress. TsT-26 electrodes and a new EP 377 electrode wire containing 2-4% ferrite were also developed for manual and automatic MIG and TIG welding of Kh16N9M2 steel, respectively. Kh16N9M2 steel is produced in the form of 11-13 ton ingots, 6500x2500x(12-50) mm plates, 4000x1800x140 mm slabs, and 530x12mm welded and 530x30 mm centrifugally cast pipes at the Dneprospetsstal, Barrikady im. Il'ich, Kommunarsk, Yuzhnotrubby, and other metallurgical plants. Orig. art. has: 5 figures.

[ND]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG:REF:009/ OTH:REF:003/ ATD PRESS:

5035

Card 2/2

L 35487-65

ACCESSION NR: AP5007836

S/0288/64/000/003/0061/0066

AUTHOR: Albuzhev, P.M.; Kopaydn, G.F.; Kuz'menko, Yu. P.; Cheshev, V.F.;
Yarunov, A.M.

TITLE: A study of torque meters

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk,
no. 3, 1964, 61-66

TOPIC TAGS: spring potentiometer, torque meter, capacitance torque meter, tensometric
torque meter

ABSTRACT: Modern technology usually employs three methods for the measurement of torque: a. breaking, b. reactive moments transmitted to the stator of the motor, and c. deformations of links which transmit the moment. Many practical devices utilize electrical elements. The authors concentrated their study on the tensometric and capacit-
ative meters (with appropriate amplifiers) for the registration of torques on the shaft of
the impact unit of an electromechanical hammer. Tests showed that the tensometric
meters did not supply satisfactory records of either the active or the reactive moments
(the vibrations of the electric motor, hammer recoil, and the passage of shock waves
through the shaft cause distortions in the oscillograms). Capacitative meters yield poor
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L 35487-65

ACCESSION NR: AP5007836

results for the same reasons. However, a four-contact spring-potentiometric meter developed by the authors at the Laboratoriya teoreticheskoy mekhaniki (Laboratory of theoretical mechanics) of the Novosibirskiy elektrotekhnicheskiy institut [Novosibirsk electrical engineering institute] and described earlier (Patent No. 37227 of 13 May 1968, issued by the Komitet po delam izobreteniy i otkrytiy pri soвете Ministrov SSSR [Committee for Inventions and Discoveries, Council of Ministers, SSSR]) supplies satisfactory results since it actually reacts to the recoil of the impact unit and to the passage of shock waves through the shaft. This meter does not need any amplifiers and may be used for the study of other mechanisms and machines operating with vibrational and pulsed loads. Orig. art. has: 9 formulas and 3 figures.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut (Novosibirsk Electrical Engineering Institute)

SUBMITTED: 10Dec63

ENCL: 00

SUB CODE: EE

NO REF SOV: 015

OTHER: 001

Card 2/2

L 15627-63

S/0286/63/000/002/0043/0043

ACCESSION NR: AP3000855

AUTHOR: Chashev, V. N.

TITLE: Drawing broach. Class B 23d; 49c, 8 sub 04; No. 152775

SOURCE: Byul. izobrazheniy i tovarnykh znakov, no. 2, 1963, 43

TOPIC TAGS: drawing broach, automatic lubrication

ABSTRACT: 1. Drawing broach, equipped with a central axial channel connected by means of radial openings with the periphery in order to supply lubricant into the machining zone, and liners installed between smoothing teeth, which can be spherical for example; its distinguishing feature is that in order to improve the conditions of access of lubrication in the finishing of the worked hole, the radial apertures are connected to sockets on the periphery of the liners for rollers which are radially spring-mounted in the direction of the radial openings; the generatrices of the rollers form a circular arc which is very much like the curvature of the periphery of the machined hole.

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ACCESSION NR: AP3000855

2. Drawing broach as per Item 1, its distinguishing feature being that in order to uniformly lubricate the entire surface, the liners are installed in pairs with a relative angular displacement such that the rollers of the neighboring liners are arranged in checkerboard fashion. Orig. art. has: 1 figure (see Enclosure) Abstractor's note: complete translation.

ASSOCIATION: none

SUBMITTED: 06 Oct 61

DATE ACQ: 28 May 63

ENCL: 01

SUB CODE: MD

NO REF SOV: 000

OTHER: 000

Cord 2/3 ✓

I 31533-66 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) IJP(c) GD/BC
ACC NR: AT6011935 SOURCE CODE: UR/0000/66/000/000/0158/0162

AUTHOR: Gorbunov, V.I. (Tomsk); Makarov, N. Ya. (Tomsk); Cheshev, V. V. (Tomsk); 72
Abramov, V. P. (Tomsk); Voroshen', L. B. (Tomsk) 71

ORG: none B+1

TITLE: Automatic quality control of very thick products

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy, 5th. Avtomaticheskij kontrol' i metody elektricheskikh izmereniy; trudy konferentsii, t. 2: Izmeritel'nyye informatsionnyye sistemy. Ustroystva avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Information measurement systems. Automatic control devices. Electrical measurements of nonelectrical quantities). Novosibirsk, Izd-vo Nauka, 1966, 158-162

TOPIC TAGS: automatic control system, quality control, betatron, x ray apparatus, flaw detector

ABSTRACT: The mass production control of very thick products requires the development of new, more efficient devices for the realization of satisfactory quality control. The present paper describes a BD-1 automated betatron flaw detector, a universal mobile device based on the B-25/10 betatron and presents a detailed outline of its automatic control. The device can carry out continuous plant control of steel products 50-500 mm thick and 0.5 to 8 m long. The

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ACC NR: AT6011935

test piece may have a complex configuration with a maximum drop in thickness along the irradiation direction of up to 100 mm. Experiments carried out at 25 MeV (radiation intensity 40-60 Roentgen/min) show that flaw detection is no worse than 0.3-1% of the maximum thickness of the sample. The productivity is at least 2 m²/hour, the device requires a three-phase a. c. power supply, and it uses no more than 15 kW. The article describes the process of production control, outlines the automatic control system, and the X-ray photography system. Orig. art. has: 3 figures. 14

SUB CODE: 13,09 SUBM DATE: 29Nov65/ ORIG REF: 003

Card 2/2 LC

CHESHEVA, N. P.

Chesheva, N. P.

"Material on the Clinical Aspects and Vaccine Therapy of Chronic Bacterial Dysentery." Voronezh State Medical Inst. Voronezh, 1955. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 27, 2 July 1955

CHESHEVAYA, Z. P., and DUMANSKIY, A. V.

"Utilization of the Triangular System of Coordinates in Colloid Chemistry,
4. Peptization of Iron Hydroxide by an Alkaline Solution of Tartaric Acid
Sodium, 1," ZhOKh, 1, 325, 1931.

CHESHIK, S.G.

Clinical characteristics of the basic forms of adenovirus diseases in children. Vop. okh. ~~mat.~~ i det. 7 no.2:4-13
F '62. (MIRA 15:3)

1. Iz kliniki (nauchnyy rukovoditel' - prof. F.G. Epshteyn)
i laboratorii adenovirusov (zav. R.S. Dreyzin) Instituta
virusologii imeni D.I. Ivanovskogo (dir. - deystvital'nyy
chlen AMN SSSR prof. V.M. Zhdanov).
(ADENOVIRUS INFECTIONS)

LYARSKAYA, T.Ya.; CHESHIK, S.G.

Rhinocytoscopic studies in adenovirus infections in children. Vop.
okh.mat.i det. 7 no.4:14-18 Ap '62. (MIRA 15:11)

1. Iz kliniki (nauchnyy rukovoditel' deystvitel'nyy chlen AMN SSSR
prof. A.F.Bilibin, zav. - dotsent Ye.S.Ketiladze) Instituta
virusologii imeni D.I.Ivanovskogo (dir. - deystvitel'nyy chlen
AMN SSSR prof. V.M.Zhdanov) AMN SSSR.
(ADENOVIRUS INFECTIONS) (NOSE)

CHESHIK, S.G.; DREYZIN, R.S.

Role of adenovirus infections in the course and outcome of pneumonia in infants. Sov.med. 25 no.5:65-71 My '62. (MIRA 15:8)

1. Iz kliniki (nauchny rukovoditel' - prof. F.G.Epshteyn) i laboratorii adenovirusov (zav. R.S.Dreyzin) Instituta virusologii imeni D.I.Ivanovskogo AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. V.M.Zhdanov.

(PNEUMONIA) (ADENOVIRUS INFECTIONS)

CHESHIK, V.G.; AL'PEROVICH, D.M.

Clinical X-ray observations of the state of the organs of the chest cavity during the days immediately following surgery on the lungs.
Zdrav. Bel. 7 no.12:8-12 D '61. (MIRA 15:2)

1. Gomel'skaya oblastnaya 1-ya sovetskaya bol'nitsa (glavnyy vrach V.E.Kovalyuk).
(LUNGS__SURGERY) (CHEST__RADIOGRAPHY)

CHESHIK, V.G.; KONTOROVA, D.Ye.

Coelomic cyst of the pericardium. Zdrav. Bel. 8 no.4:58-59
Ap '62. (MIRA 15:6)

1. Iz torakal'nogo otdeleniya Gomel'skoy oblastnoy bol'nitsy
(glavnyy vrach F.E. Kovalyuk).
(PERICARDIUM—TUMORS)
(CYSTS)

~~CHESHIK, V.G.; KONTOROVA, D.Ya.~~

Technique of bronchography. Zdrav. Bel. 9 no.6:74-75 Je '63.
(MIRA 17:5)

1. Iz torakal'nogo otdeleniya Gomel'skoy oblastnoy bol'nitsy.

CHESHIK, V.G.

Transsternal retrosternal esophagoplasty from the right half of
the large intestine. Khirurgiya 39 no.6:122-124 Je '63.

(MIRA 17:5)

1. In torakal'nogo khirurgicheskogo otdeleniya (zav. V.G. Cheshik)
na baze Gomel'skoy oblasti tuberkuleznoy bol'nitsy (glavnyy
vrach A.P. Bondarenko).

CHESHIK, V.G.

Treatment of rupture of the main bronchus in closed thoracic trauma. Khirurgia 39 no.8:19-25 Ag 63. (MIRA 17:6)

1. Iz torakal'nogo otdeleniya (zav. V.G. Cheshik) Gomel'skoy oblastnoy bol'nitsy (glavnyy vrach A.D. Yevseychik).

CHESHIK, V.G. (Gomel', ul. Trudovaya, dom 5, kv.50)

Removal of a foreign body with suture of the laceration of
the thoracic portion of the esophagus. Grud. khir. 6 no.1:
112-113 Ja-F '64. (MIRA 18:11)

CHESHIK, V.G. (Gomel', Trudovaya ul., 5, kv. 50)

Bronchotomy in endobronchial hamartoma. Vest. khir. 92 no.6:
122-123 Je '64. (MIRA 18:5)

1. Iz Gomel'skoy oblastnoy bol'nitsy (glavnyy vrach - A.D. Yevseychik)

CHESHIKHIN, G. V.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Udachin, S. A.		
<u>Cheshikhin, G. V.</u>		
Prokuronov, N. I.	"Planning of Land Organi-	Moscow Institute of Land
Tsfasman, Ya. M.	zation"	Management Engineers
Burikhin, N. H.		
Baranchuk, A. M.		
Maslöv, A. V.		
Gorokhov, G. I.		

SO: W-30604, 7 July 1954

CHESHIKHIN, G. V. AND TSFASMAN, Ya. M.

(Cands. in Agr. Sci.)

"The simplest Land Surveying in Virgin and Fallow Lands," published in -
An Aid to Agricultural Specialists in the Reclamation of Virgin and Fallow Lands,
Sbornik Materialov i Statey, Vol. 1, pp 24-144, 1954.

Translation No. 431, 30 Jun 55.

CHESHIKHIN, German Vasil'yevich.

Academic degree of Doctor of Economical Sciences, based on his defense, 2 June 55, in the Council of Moscow Inst of Engineers of Land Organization, of his dissertation entitled: "Agrarian reforms and land organization in the people's Republic of Bulgaria."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 5, 3 Mar 56, Byulleten' MVO
SSSR, No. 2, Jan 57, Moscow, pp 17-20, Uncl. JPRS/NY-466

CHESHIKHIN, G.V., prof., doktor ekon.nauk

Socialist farm management and correct utilisation of land. [Problems of land organisation in the sixth five-year plan. Reviewed by G.V. Cheshikhin]. Zemledelie 7 no.4:93-94 Ap '59.(MIRA 12:6)
(Agriculture)

CHESHIKHIN, G.V.

Taking into consideration geographical conditions in planning
land utilization within the national economy. Vop. geog.
no.54:6-19 '61. (MIRA 15:3)
(Land) (Yermak District--Farm management)

UDACHIN, S.A., prof.; TSFASMAN, Ya.M., dots.; CHESHIKHIN, G.V., prof.;
PROKHONOV, N.I., prof.; GOROKHOV, G.I., prof.; BURIKHIN, N.N.,
prof.; OZEROV, V.N., red.; DEYEVA, V.M., tekhn. red.

[Planning land utilization] Zemleustroitel'noe proektirovanie.
Izd.4., perer. i dop. Moskva, Sel'khozizdat, 1962. 463 p.
(MIRA 15:11)

(Rural planning)

CHESHIKHIN, German Vasil'yevich; TROITSKIY, V.P.

[Agricultural regional planning and use of lands] Sel'skaia raionnaia planirovka i ispol'zovanie zemel'. Moskva, Ekonomizdat, 1962. 205 p. (MIRA 16:11)
(Agricultural policy)

TARKHOVA, M.A.; CHESHIKHINA, K.O.

Cretaceous intrusions of the central Dzhugdzhur Range. Trudy
VAGT no.7:103-111 '61. (MIRA 14:7)
(Dzhugdzhur Range—Rocks, Igneous)

Cheshikhina, V.

DRDA, Jan; MOLOCHKOVSKIY, Yur. [translator]; CHESHIKHINA, V. [translator];
SEKUNDOV, M., redaktor

[Brazil; travel notebook. Translated from the Czech] Brazilia; iz
putevykh reportazhei. Perevod s cheshskogo IUr. Molochkovskogo i
V.Cheshikhinai. Moskva, Izd-vo "Pravda," 1957. 55 p. (Biblioteka
"Ogonek," no.2') (MLRA 10:6)
(Brazil--Description and travel)

CHESHIN, S. S., Cand Tech Sci -- "Effect of the age of parents
on the quality of ~~the~~ cattle's offspring." Mos, 1961. (Mos
Order of Lenin Agr Acad im K. A. Timiryazev) (KL, 8-61, 255)

- 390 -

CHEKIS, A.L.

Appendectomy in children with rheumatic fever. Sov. med. 28 no.1:
71-74 Ja '65. (MIRA 18:5)

1. Khirurgicheskoye (zav. M.P.Senatova) i revmatologicheskoye
(Zav. A.A.Ivanova) otdeleniya detskoy gorodskoy bol'nitsy no.9
imeni Dzerzhinskogo (glavnyy vrach A.N. Kudryashova), Moskva.

CHESHITEV, G.; BONGHEV, E.

Karagiuleva, IU. Notes on the stratigraphy of apatite in northeast Bulgaria.
p. 59. (IZVESTIIA, Vol. 4, 1956, Sofia, Bulgaria)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sep 1957. Uncl.

AUTHOR: CHESHKO, E.V. PA - 2469
TITLE: Cooperation between Bulgarian and Soviet Philologists.
(Sovmestnaya rabota bolgarskikh i sovyetskikh filologov, Russian)
PERIODICAL: Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 1, pp 81 - 82
(U.S.S.R.)
Received: 5 / 1957 Reviewed: 5 / 1957
ABSTRACT: Several Slav countries are at present cooperating in the compilation of atlases of existing dialects. They are intended to form the basis for an All-Slav linguistic atlas to be compiled. Thus, cooperation has already begun between Russia and Bulgaria and work is being performed jointly by the Institute for the Bulgarian language of the Bulgarian Academy of Science and the Soviet Institute of Slavistics of the Academy of Science of the U.S.S.R. for the purpose of compiling an atlas of Bulgarian dialects. An expedition consisting of 28 Russian and Bulgarian experts has already carried out work in the district of Burgass from the end of July to the 20th September 1956. Hitherto 78 villages in the district of Burgass were investigated, on which occasion 2 - 4 older "representatives of traditional dialects" were questioned in order to obtain the necessary information. The next expedition is intended

Card 1/2

PA - 2469

Cooperation between Bulgarian and Soviet Philologists
to explore the districts of Khaskov and Starozagorsk.

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress.

Card 2/2

9 Spectrographic study in the ultraviolet of sulfur dioxide and sulfurous and methanesulfonic acids and their derivatives. I. N. A. Valyashko and F. P. Cheshko (V. I. Lenin Polytech. Inst., Kuarskov). *Sbornik State Obshchestven. Nauch. Nauch. S.S.S.R.* 1, 872-83 (1953).—SO₂ in pentane shows absorption max. 2600 Å. (ε 6400), sharp min. 2450 Å. (ε 125) and a rising max. 2280 Å. (ε 8000); SO₂ in EtOH shows a shift of max. to the shorter wave end by 50 Å. with 8-fold drop in intensity; SO₂ in EtOH shows a weak band at 3500 Å., a moderate band about 2800 Å.; in SO₂-H₂O system the max. is similar to that in EtOH, but the absorption is less intense with a steep slope at the longer wave end, indicating a concealed max. about 3300 Å. SO₂ in concd. H₂SO₄ gives a spectrum similar to that in pentane, but reduced in intensity some 13-fold. The changes in absorption are interpretable by H-bond formation and coordination complexes with the solvents. (MeO)₂SO in EtOH shows max. pattern which follows that of SO₂ in EtOH but with much smaller intensity; (MeO)₂SO in H₂O gives a similar spectrum but still less intense, while (MeO)₂SO in pentane gives a spectrum similar to SO₂ in pentane, but some 4000-fold less intense. This result is interpreted by the ready loss of polarizability of the SO link after H-bond coordination with the solvent; the 3rd O atom on the S atom greatly reduces the tendency of the latter to form double bonds with the other O atoms. NaHSO₃ in aq. soln. shows absorption max. about 3730 Å. (ε 10) with a weak max. between 3440 and 3460 Å.; aq. Na₂SO₃ gives continuous spectrum without max.; in 33% aq. EtOH it shows weak absorption max. at 3300 and 2580 Å.; the addn. of EtOH shifts the main max. by 200 Å. to the longer wave end with 4-fold decrease in intensity. MeSO₂Me in liquid state or in EtOH shows absorption max. 2780 Å. (ε 12.5) with a weak band in far ultraviolet; in pentane this ester showed lowered intensity of absorption by some 3-fold; in aq. soln. the intensity of absorption is reduced 4-fold in comparison with EtOH; in 2M aq. soln. there is an absorption max. at 2600

4
Å. which is very weak, but this band is intensified by EtOH. MeOSO₂Cl in liquid state or in EtOH shows max. 2400 Å. (very weak) and 2800 Å. with a possible band in far ultraviolet. The 2500 Å. band in MeSO₂Me is one fifth as intense as that of (MeO)₂SO, while the 2780 Å. band is 1.5 times more intense and that at 2100 Å. is 16 times more intense than in (MeO)₂SO. These results are interpreted as the result of the presence of 2 semipolar SO links in the sulfonate, which enhances the intensity of 2780 Å. band. MeSO₂Na in aq. soln. shows an absorption max. about 2500 Å. which is very weak, but addn. of EtOH intensifies this band considerably, owing to destruction of the hydration zone. Thus (MeO)₂SO contains no double SO links although potentially one such link can form. Soly. of MeSO₂Na in H₂O is 119.03 g. per 100 g. at 20°. Spectrographic study in the ultraviolet of benzenesulfonic acid and its derivatives. II. N. A. Valyashko and F. P. Cheshko. *Ibid.* 534-55.—Spectrographic evidence is presented which indicates that in PhSO₃H and PhSO₃NH₂, the interaction of the ring and the polar group can be evaluated. The SO₃NH₂ group can either attract electrons from Ph or furnish them to the ring depending on the environment; electron attraction is characterized by 2780 Å. band. The spectrum of C₆H₅ in concd. H₂SO₄ completely agrees with that of PhSO₃H in H₂SO₄; the effect can be used for following sulfonation which takes in H₂SO₄ of higher than 66.4% concn. at elevated temp. PhSO₃H in EtOH shows absorption max. at 2930, 2720-2550, and 2100 Å.; in aq. soln. these are 3100, 2720-2550, 2100 Å., resp., while in concd. H₂SO₄ they are 2720-2550 and 2130 Å. PhSO₃Na in EtOH shows absorption max. at 2600-2570 and 2100 Å.; in H₂O 2700-2530 and 2100 Å. PhSO₃Me in EtOH: 3400, 2730-2550, and 2400 Å. PhSO₃NH₂ in EtOH has absorption max. at 2780-2680 and 2200 Å.; in H₂O 2780-2550 and 2200 Å.; in concd. H₂SO₄ 2780 and 2170 Å.; in 50% EtOH 2720-2550 and 2200 Å.; in the presence of 0.02M NaOH, 2740-2600 and 2150 Å.; in the presence of large amts. of NaOH, 2700 and 2150 Å.; in the presence of large amts. of NaOH, PhSO₃Cl per se or in EtOH 2730, 2350, and 2100 Å. p-MeOC₆H₄SO₃Na in H₂O 2780 and 2300 Å.; o-analog, 2730, 2330 Å. G. M. Knechtel

CHESEKOV, F. F., and VALYASHKO, N. A.

Spectrographic Study in Ultra Violet Light of Benzene Sulfonic Acid and Its Derivatives. II. page 504. Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol 1, Moscow-Leningrad, 1953, pages 762-766.

Khar'kov Polytechnic Inst imeni V. I. Lenin

CH 27/20 100

Acidic properties of benzenesulfonamide. I. P. F. Chesky (V. I. Lenin Polytech. Inst., Kharkov). ~~Chem. Zhurn. Khim., Akad. Nauk S.S.S.R.~~ 1, 598-60 (1959); cf. C.A. 47, 7886h. The system: $\text{PhSO}_2\text{NH}_2\text{-NaOH}$ in a total concn. of $2 \times 10^{-3} \text{M}$ in H_2O was examined as to cond., polarographic behavior, d , viscosity, n , and surface tension. The results, presented only graphically, indicate that the various phys. properties listed above show singular points at the molar ratio 2:1 ($\text{NaOH-PhSO}_2\text{NH}_2$), while at all other points, the property-concn. curves are smooth and regular. Hence, in alk. medium, the amide disoc. only as a dibasic acid; no stepwise ionization could be detected. The curves for the system NaOH-solvent show no singular points. The cleavage of 2 protons from the amide group is caused by the location of the electron pair from N to S, thus developing a pos. charge at the N atom. In a neutral soln., PhSO_2NH_2 is a nonelectrolyte. G. M. Kosolapov

CHESHKO, F. F.

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Electronic Phenomena and Spectra

A weak band in the ultraviolet absorption spectrum of benzene. F. F. Cheshko (V. I. Lenin Polytech. Inst., Kharkov). *Zhur. Fiz. Khim.* 27, 187-8 (1953); cf. Pitts, *C.A.* 44, 10506k.—The ultraviolet absorption spectrum of benzene was observed immediately after prepn. (A) and again after standing 2 years in a ground-glass-stoppered flask under a bell jar in the dark (B). The benzene was made by distn. of BzOH and soda lime, then redistd. until its spectrum became const. A broad absorption band was found in B at 3000 Å.; the extinction coeff. at the max. was 0.032. This band was absent in A. J. W. L., Jr.

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Acidic properties of benzenesulfonamide. Doklady Akad. Nauk S.S.S.R.
88, 855-8 '53. (MLRA 6:2)
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